

Specific Heat of Vegetable Oils as a Function of Temperature Obtained by Adiabatic Scanning Calorimetry

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Vegetable oils can undergo changes in their properties when they are subjected to processes such as extraction, purification, cooking, frying or chemical modifications that are required depending on the application in the food industry [1]. One of the main thermal property of the vegetable edible oils is the specific heat, which allows us to evaluate the transformation undergone a sample to be stored for some time and varying temperature, which can be measured by a calorimetric technique [2]. By using an adiabatic scanning calorimeter (ASC), the specific heat of vegetable edible oils were obtained as a function of temperature, in the range of 35°C to 70°C, for four different vegetable edible oils (extra virgin olive oil, virgin avocado oil, grape seed oil and sesame oil), finding for specific heat of samples a linear behavior dependence when the temperature is increased.

References

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